

New Diagonal Graph Ramsey Numbers of Unicyclic Graphs

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Let G and H be connected simple graphs. The graph Ramsey number $R(G, H)$ is defined to be the minimum n , where every 2-edge-coloring of K_n contains a monochromatic red G or a monochromatic blue H . Grossman conjectured that $R(G, G) = 2 \cdot |V(G)| - 1$, for all simple connected unicyclic graphs G of odd girth and $|V(G)| \geq 4$. In this talk, we prove his conjecture for various classes of G containing a triangle. In addition, new diagonal graph Ramsey numbers are calculated for some classes of unicyclic graphs of even girth.

Key words: graph Ramsey theory